

REMARKS

Claims 1, 2, 3, 14 and 15 are amended and Claims 19 and 20 are added. Claims 1-20, as amended, remain in the application. No new matter is added by the amendments to the claims.

The Rejections:

In the Office Action dated September 20, 2005 the Examiner objected to Claims 2, 3 and 15 as follows:

Claim 2 is objected to because of the following informalities: The beams must extend from the first crossbar to the third cross bar, not to the second crossbar as stated on Page 14, Lines 18 and 19, so that a lower left-hand one of the grids and a lower right-hand one of the grids are open at a respective left-hand side and right-hand side. The office will examine claim 2 with each outermost one of the beams extending only from the first crossbar to the third crossbar.

2. Claim 3 is objected to because of the following informalities: Claim 3 should read "The elevator counterweight according to claim 2" due to lack of antecedent basis for the limitation in the claim. The office will examine claim 3 with the stated correction.

3. Claim 15 is objected to because of the following informalities: The statement "a least one" stated on Page 16, Line 14 is improper grammar. The office will examine claim 15 with the recommended correction "at least one".

The Examiner rejected Claim 1 35 U.S.C. 102(b) as being anticipated by Nakanishi (U.S. Patent# 5300737) stating that Nakanishi discloses an elevator counterweight 15 for connection to an elevator car 1 by flexible support means 4a, 4b, 4c and movable along counterweight guide rails 21, 22. According to the Examiner: the counterweight frame 14 is adapted to be connected to the flexible support means 4a, 4b, 4c and moved along the counterweight guide rails 21, 22; a plurality of weight elements 16, 17 are fixed in the frame 14; upper and lower guide shoes 23, 24, 32a, 32b, (not numbered but shown in Figure 2) are attached to the frame 14 and adapted to engage the counterweight guide rails 21 and 22; the frame 14 includes at least four vertical beams 14c, 25, (not numbered but shown in Figure 2) spaced over a width of said frame and at least three horizontal crossbars 14a, 14b, 26 attached to said vertical beams 14c, 25, (not numbered but shown in Figure 2); and the beams 14c, 25, (not numbered but shown in Figure 2) and the

000132702\0070\666106-1

6

crossbars 14a, 14b, 26 form a plurality of grid fields with the weight elements 16, 17 being fixed in at least one of the grid fields.

Regarding Claim 2, the Examiner stated that Nakanishi further discloses a first one of the crossbars 14a terminates the frame 14 at a top. A second one of the crossbars 26 terminates the frame 14 at a bottom. A third one of the crossbars 14b is arranged between the first and second crossbars 14a and 26. Each outermost one of the beams 14c, 25, (not numbered but shown in Figure 2) extending only from the first crossbar 14a to the third crossbar 14b so that a lower left-hand one of the grids and a lower right-hand one of the grids are open at a respective left-hand side and right-hand side. The lower guide shoes 32a, 32b being mounted in the lower left-hand grid and the lower right-hand grid.

Regarding Claim 4, the Examiner stated that Nakanishi further discloses the beams 14c, 25, (not numbered but shown in Figure 2) and the crossbars 14a, 14b, 26 are arranged in a common plane.

Regarding Claim 7, the Examiner stated that Nakanishi further discloses the lower guide shoes 32a, 32b are attached to an upper surface of a lowermost one of the crossbars 26.

Regarding Claim 8, the Examiner stated that Nakanishi further discloses safety brake devices 30 attached to a lower surface of an intermediate one of the crossbars 14b.

Regarding Claim 9, the Examiner stated that Nakanishi further discloses the beams 14c, (not numbered but shown in Figure 2) prevent horizontal movement of the weight elements 16, 17 in the grids.

Regarding Claim 10, the Examiner stated that Nakanishi further discloses the weight elements are formed as rectangular blocks.

Regarding Claim 15, the Examiner stated Nakanishi further discloses an elevator counterweight 15 for use in an elevator installation. A counterweight frame 14 including a first plurality of vertical beams 14c, 25, (not numbered but shown in Figure 2) spaced over a width of the frame 14 and a second plurality of horizontal crossbars 14a, 14b, 26 attached to the vertical beams 14c, 25, (not numbered but shown in Figure 2). The beams 14c, 25, (not numbered but shown in Figure 2) and the crossbars 14a, 14b, 26 forming a plurality of grid fields including a lower right-hand grid open at a right side and a lower left-hand grid open at a left side. At least one weight element 16, 17 fixed in one of the grids other than the lower right-hand grid and the

000132702100701666106-1

7

lower left-hand grid. A pair of lower guide shoes 32a, 32b, (not numbered but shown in Figure 2) attached to the frame 14 and adapted to engage the counterweight guide rails 21, 22. One of the guides shoes 32a, 32b being positioned in the lower right-hand grid and another of the guides shoes 32a, 32b being positioned in the lower left-hand grid.

Regarding Claim 16, the Examiner stated that Nakanishi further discloses the lower guide shoes 32a, 32b are attached to an upper surface of a lowermost one of the crossbars 26.

Regarding Claim 17, the Examiner stated that Nakanishi further discloses safety brake devices 29, 30 positioned in the lower right-hand grid and the lower left-hand grid and are attached to a lower surface of an intermediate one of the crossbars 14b.

Regarding Claim 18, the Examiner stated that Nakanishi further discloses the beams and the crossbars are arranged in a common plane.

The Examiner rejected Claims 3 and 5 under 35 U.S.C. 103(a) as being unpatentable over Nakanishi (U.S. Patent# 5300737) in view of Gruber et al. (U.S. Patent# 6105798). The Examiner stated that Nakanishi discloses an elevator counterweight 15, but is silent concerning beams that penetrate crossbars and are connected with the crossbars at penetration locations.

Regarding Claim 3, the Examiner stated that Gruber et al. teaches a crossbar 30 is fastened to beams 26 and 28 in a selected one of two vertically spaced positions to determine a height. According to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to fasten the third crossbar to the beams disclosed by Nakanishi in a selected one of two vertically spaced positions to determine a height of the lower left-hand grid and lower right-hand grid taught by Gruber et al. to fit desired components within the lower left-hand grid and lower right-hand grid.

Regarding Claim 5, the Examiner stated that Gruber et al. further teaches beams 26 and 28 that penetrate crossbars 30 and are connected with the crossbars 30 at penetration locations and it would have been obvious to one of ordinary skill in the art at the time of the invention to make the beams taught by Nakanishi penetrate crossbars and connect with the crossbars at penetration locations taught by Gruber et al. to evenly distribute the load onto the crossbars.

The Examiner rejected Claims 6, 11, and 14 under 35 U.S.C. 103(a) as being unpatentable over Nakanishi (U.S. Patent# 5300737) in view of Gagnon et al. (U.S. Patent# 5086881). The Examiner stated that Nakanishi discloses an elevator counterweight 15.

0001327020070\666106-1

8

Regarding Claim 14, the Examiner stated that Nakanishi further discloses an uppermost crossbar 14a having a center horizontal welding plate 19 for fastening support means 4a, 4b, 4c, but that Nakanishi is silent concerning U-shaped cross section beams spaced to define a first and second width of a grid field.

In regards to Claim 6, the Examiner stated that Gagnon et al. teaches beams 48 formed with profile members having a U-shaped cross-section and it would have been obvious to one of the ordinary skill in the art at the time of the invention to manufacture the beams disclosed by Nakanishi with a U-shaped cross-section taught by Gagnon et al. to securely fix weight elements between the beams.

In regards to Claim 11, the Examiner stated that Gagnon et al. further teaches beams spaced to define a first width for a first portion of grid fields and a second width different from the first width for at least a second portion of the grid fields shown in Figures 1, 2, and 3 and it would have been obvious to one of the ordinary skill in the art at the time of the invention to have beams disclosed by Nakanishi spaced to define a first and second width of a grid field taught by Gagnon et al. to provide a diverse size of grids to accommodate various sized components.

The Cited References:

Nakanishi shows an elevator counterweight 15 having a frame 14 with weights 16, 17 placed between upper and lower frame members 14a, 14b connected by four column members 14c. Brakes 29, 30 are mounted on support shafts 25 that extend between the lower frame member 14b and a buffer plate 26.

The Gruber et al. patent relates to storage racks and has nothing to do with elevator counterweights. A rack 10 has shelves 14, 14A, 14B mounted to a plurality of upright supports 12.

Gagnon et al. shows a counterweight having U-shaped vertical channel sections 44.

The Response:

Applicant amended Claims 2, 3 and 15 as suggested by the Examiner and also corrected typographical errors in Claims 3 and 14.

000132702\0070\666106-1

9

The Examiner objected to Claims 12 and 13 as being dependent upon a rejected base claim, but stated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. New Claims 19 and 20 correspond to Claims 12 and 13 respectively with Claim 12 being rewritten in independent form.

Nakanishi shows an elevator counterweight 15 having a frame 14 with weights 16, 17 placed between upper and lower frame members 14a, 14b connected by four column members 14c. Only the spaces surrounded by the frame members 14a, 14b and 14c are adapted to receive the weights 16, 17. The spaces formed by the support shafts 25, the lower frame member 14b and the buffer plate 26 are filled by the brakes 29, 30 and are not adapted to receive the weights. Thus, Nakanishi has only three grid fields adapted to receive the weights; not at least four as defined by amended Claim 1. Also, Nakanishi has only two horizontal crossbars 14a, 14b; not at least three as defined by amended Claim 1. The Nakanishi buffer plate 26 is not a crossbar since it is not attached to any of the column members 14c to form the grid fields per Claim 1.

Regarding Claims 2, 7 and 15, the "lower guide shoes" 32a, 32b identified by the Examiner are brake arms that do not engage the guide rails. The Nakanishi counterweight 15 utilizes sliding roller members (see 23, 24 attached to the frame member 14a) attached to the buffer plate 26 outside any grids formed by the frame 14.

Regarding Claims 8 and 16, the Nakanishi brakes 29, 30 are attached to the support shafts 25 that extend downwardly from the lower frame member 14b. Thus, the Nakanishi brakes are not attached to a lower surface of an intermediate crossbar.

Gruber et al. does not provide any missing elements. Contrary to the statements of the Examiner, Gruber et al. does not teach a crossbar 30 fastened to beams 26 and 28 in a selected one of two vertically spaced positions to determine a height. The rear frame member 26, the front frame member 28 and the guide member 30 all extend in a horizontal plane.

While Gagnon et al. shows a counterweight having U-shaped vertical channel sections 44, it does not provide any of the claimed elements missing from the Nakanishi patent.

The Examiner stated that the prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The Examiner cited the U.S. Patent No. 1,509,803 issued to Brown; the U.S. Patent No. 2,326,783 issued to Kautz; the U.S. Patent No. 5,625,174 issued to Ito et al.; and the U.S. Patent Publication No. 2003/0168290 of Miyakoshi et al. Applicant

000132702\0070\666106-1

10

reviewed these references and found them to be no more pertinent than the prior art relied upon by the Examiner in his rejections.

In view of the amendments to the claims and the above arguments, Applicant believes that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.

000132702\0070\666106-1

11